

Urination Disorders and Incontinence
(part two of two)
[Hainyō Shōgai to Nyō Shikkin (ge)]

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4) Hyperactive Bladder, Unstable Bladder

These are illnesses which cause urge incontinence. Urge incontinence occurs when the bladder causes involuntary uninhibited constriction in the urine accumulated, thereby resulting in incontinence. There is hyperactive bladder which is the sequelae to cerebral hemorrhage, Parkinson's disease and spinal damage or there is unstable bladder where there are no nervous symptoms of the arms and legs. Therapeutic agents for incontinence used to treat urge incontinence are currently being established as a useful means. However, how to check enlargement of the prostate gland, lack of detrusor and sphincter coordination and other passage impairments (with or without urine retention) is problematic. Furthermore, when daily life activities decline, the effect of an incontinence therapeutic agent is too strong and may result in difficulty in urination. In any event, when an incontinence therapeutic agent is used, checking for urine retention is thought to be extremely important. Measuring urine retention using ultrasound tomography involves measuring the upper and vertical diameters (Acm), the left and right diameters (B) and the front and back diameters (C) and the capacity is found by using an approximation for ellipsoid volumetry. (Figure 1).

* Numbers in the margin indicate pagination in the foreign text.

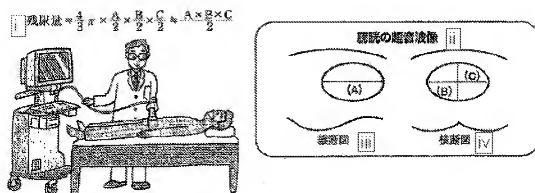


Figure 1

Key: i) Amount of urine retention; ii) Ultrasound wave image of bladder; iii) vertical cross section; iv) horizontal cross section

5) Hypoactive Bladder

Hypoactive bladder occurs in rectal cancer, after surgery for pelvic splanchnic organs in uterine cancer, diabetes or spina bifida and other sacral vertebra urination reflex center due to peripheral nerve impairment. In cases of hypoactive bladder, this becomes abdominal pressure due to a lowering (loss) of the sphincter reflex. Furthermore, as the urge to urinate declines, usually frequent urination is carried out to prevent incontinence. Most of the cases of urinary incontinence following surgery for uterine cancer the author has experienced in more than 15 years involved maintaining a balance in low compliance bladder (elimination of distention characteristics) as well as an incomplete urethra. However, naturally this developed into a miserable situation whereby the patient could not be weaned from pads or diapers. Because of this, I had a heartfelt need to administer an α_1 blocker to rectify the person's

own directing of urine (can be removed for short periods of time) as well as the sphincter and urethra pressure. Presently we are carrying out tests on abdominal pressure urination introduction based on bladder capacity using an ultrasonic bladder image diagnosing device (BVI 5000)) and an α_A blocker. An ultrasonic image of the bladder as well as measuring the bladder capacity calculated automatically using a BVI 5000 are indicated in Figure 2.

/58

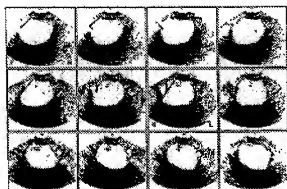


Fig 2 BVI 5000 Bladder Scan™
Female Scan, Software Version 1.040, Bladder Volume=578ml

Points in Urination Control of the Elderly

1) Improvement of Daily Life Activities

We prepared a living environment suitable for the method of moving and living to ensure the patient's autonomy in elimination.

- (1) Even if there is a patient who urinates in bed and uses diapers and who has an urge to urinate, the patient gets up in an electrically powered gauge bed and practices using a urination device.

- (2) We used a commode-type portable toilet with good stability which could be adjusted for height and guided the patient while paying due attention to leg support. Leg support is carried out by having the leg make contact with the bed so that the urination reflex can be easily incited. (Figure 3)
- (3) For patients who can still make it to the toilet, a rail is set up in the corridor and on the wall of the toilet and is remodeled into a western-style toilet which makes it easy to stand up.

2) Improvement of Constipation

When a patient is constipated, frequent urination as well as relaxation of the pelvic lower muscle group is promoted by pressure of the bladder due to fecal matter in the intestine and causes abdominal pressure incontinence. Furthermore, it is difficult as the urination reflex does not readily occur, causing difficulty in urination. Because of this, when making contact with patients who complain of urination impairment, constipation must be taken into consideration.

- (1) Expansion and contraction of the legs in bed, twisting the body and the like start by promoting a creeping movement of the intestine due to appropriate exercise and movement whereby the entire activity of the body is gradually increased.
- (2) Food which is rich in body fiber is ingested and 100 to 150 ml of water is drunk when the patient gets up in the morning so that the pre-breakfast activity is increased.

(3) In cases of chronic constipation, coprostasis and hard stool around the intestine are first enucleated without using a laxative. When enucleation is carried out, anal irritation occurs and it becomes easier to make efforts to defecate. Furthermore, using an enema is effective after enucleation.

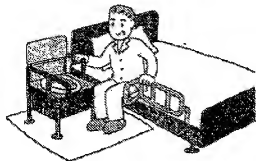


Figure 3

3) Improvement of Difficulty of Urination

Priority is given to handling difficulty in urination due to incontinence when the patient's daily life activity is insufficient. The reason for this is that when there is urine retention, the effective space for the bladder is reduced and the bladder must contract several times so that there is the risk of becoming a low compliance bladder. Furthermore, when there is urine retention, cystitis is readily caused and this fibrinizes the muscle in the bladder.

Figure 4. Selection of Antihypertensive Agent for Hypertension in the Elderly

/59

	心不全 a	狭心症 b	脳梗塞 c	低血圧 d	腎障害 e	糖尿病 f	閉塞性 肺疾患 g	下部尿路 通過障害 h
i Ca拮抗剤	△	○	○	X/O	○	○	○	○
j ACE阻害剤	○	△	○	△	△	○	△	○
k β遮断剤	X	○/○	○	X	△	X/△	X/△	○
l 降圧利尿剤	○	○	△	△/○	X~○	△	○	△
m α _{1A} 遮断剤	○	△	○	○	○	△	○	○

○: promotes O: can be used; △: use with caution; X: contraindicated
Key:

- a) Cardiac Failure;
- b) Steno-cardia;
- c) Cerebral Infarction;
- d) Brady-arrhythmia;
- e) Kidney Impairment;
- f) Diabetes;
- g) Occlusive Lung Disease
- h) Lower Urinary Tract Passage Impairment;
- i) Ca antagonist;
- j) ACE blocker;
- k) beta-blocker;
- l) hypotensive diuretic;
- m) α_{1A} blocker

Furthermore, contraindications for α_{1A} blockers are: dissociative aortic aneurysm; besides the abovementioned, it should be administered with caution for myocardial infarction.

(Ouchi [illegible], Manual for Treatment of Elderly Patients, Japan Physicians Society, 1991, Bibliographic entry 6 has been revised in part.)

In handling difficulties in urination, administering an α_{1A} blocker is useful as a therapeutic agent in improving the abovementioned daily life functions and in improving constipation. In

particular, an α_{1A} blocker should be administered as a first line drug as an anti-hypertensive agent for elderly patients with hypertension.



Figure 5

Key: a) "Easy does it.; b) That's right."

4) Points in Care of Patients with Incontinence

Suitable care of incontinence must begin with sufficient communication. Due attention must be paid to this since the elderly often do not talk about their problems or do not complain since they are reserved and because they are too proud even when they are in trouble.

- (1) Important points for care: First it is important to determine the degree of tension of the patient based on his/her facial expression and to create an atmosphere where it is easy to hold a conversation by speaking softly. Furthermore, due caution must be exercised regarding the tone of voice used when providing guidance for urination so that the persons around the patient do not notice.

(2) Care for patients with senile dementia:

Elderly persons with senile dementia are able to find signs in their behavior pattern which indicate they want to excrete in the behavior pattern, even if they cannot express themselves verbally.

It is necessary to observe closely without becoming impatient in a case where the patients go to a corner of the room or a dark location and squirm hesitantly. (Figure 5).

Other Nighttime Frequent Urination Inherent to Elderly Patients.

(1) Frequent urination due to excessive intake of water to prevent cerebral infarction.

(2) Known as unstable bladder, a decline in amount of urine per urination due to unexpected constriction of the bladder at night.

/60

(3) Atrophy of the bladder smooth muscle with complications of mild atrophy of the prostate gland and bladder occlusion.

(4) Decline in the blood flow in the kidney during daily activities brought about by the blood pressure adjustment function and a decline in the sweating function, increase in blood flow in the kidney when static or when patient is going to bed.

(5) Increase in human atrial sodium diuretic peptide, decline in the anti-diuretic hormone.

Here, in (1), guidance is often received to prevent cerebral infarction or to prevent recurrence of it. However, although rigid enforcement of drinking water is suitable, the specific amount of

drinking water affected by the season or which is a function of the sweating condition of the person is not indicated. The author believes that an amount of water drunk using 300 to 500 ml for the amount of nighttime urination as a yardstick is not suitable. Regarding (2), there is an effect such that a therapeutic agent which is effective for a short period of time is administered after supper or before going to bed. Regarding (3), an α_{1A} blocker which lowers the internal pressure of the urethra is recommended after supper. Furthermore, it is useful to use a sleeping medication having a short action time taking into consideration that fact that deep sleeping time for elderly persons is short. Regarding (4), I believe that the daily life activity should be increased and a sufficient amount of water should be drunk by suppertime. Last of all, regarding (5), it is useful to create a urination chart which records the amount of water drunk. If there is a large amount of nighttime urine, it is believed that the diurnal rhythm of the abovementioned peptide will be thrown out of kilter and it is effective to administer 1-deamino-8-D-arginine-vasopressin (DDAVP).

Future Prospects

Management of urination is part of the aging phenomenon inherent to elderly persons. It is thought that the quality of life of the elderly can be enhanced by improving this and there are few treatment and long-term care facilities which have an abundance of experience in this area. It is also important to notice the desire of the

elderly to depend on other people for their own happiness (reaching the end of their lives in comfort).

As a result, it is thought that education for treatment and long-term care is extremely important. This means that there must be a budget for persons who have a wealth of experience onsite and to implement training institutions. Furthermore, how much of a budget (taxpayer money) to allocate for education will most likely be an issue (needless to say, a budget which is converted to consumer prices).

Last of all, I do not know whether this is a suitable response; however, everyone must look back in history and give consideration to nurturing Japanese tradition (not customs) and freedom in order to build the future.

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